What is claimed is:

1. A multivalent recombinant raccoon poxvirus which can infect and replicate in feline cells, and contains more than one exogenous gene inserted into a region consisting of a thymidine kinase gene of the raccoon poxvirus genome which is non-essential for viral replication, wherein:

(a) the exogenous genes are operably linked to a promoter for expression; and

(b) each exogenous gene encodes a feline pathogen antigen

2. The multivalent recombinant raccoon poxvirus according to claim 1, wherein the exogenous genes encode feline pathogen antigens selected from the group consisting of FELV Env, FIV Gag, FIV Env, FIPV M, FIPV N, FCV capsid protein, FPV VP2, and rabies-G.

3. The multivalent recombinant raccoon poxvirus according to claim 1, wherein the exogenous genes are inserted as an expression cassette.

4. The multivalent recombinant raccoon poxvirus according to claim 1, wherein the recombinant raccoon poxvirus was produced by a recombination process comprising the steps of:

(a) inserting more than one exogenous gene into an insertion vector which has sequences, flanking the inserted genes, having sufficient homology to a region of the raccoon poxvirus genome to promote recombination of the inserted genes into the thymidine kinase gene;

(b) introducing both the insertion vector containing the exogenous genes, and raccoon poxvirus into susceptible host cells; and

(c) selecting the recombinant raccoon poxvirus, containing the exogenous genes which have recombined into the raccoon poxvirus genome, from plaques resulting from step (b).

5. The multivalent recombinant raccoon poxvirus according to claim 4, wherein the exogenous genes are inserted as an expression cassette.

6. A method of making a multivalent recombinant raccoon poxvirus, which can infect and replicate in feline cells, by a recombination process comprising the steps of:

(a) inserting more than one exogenous gene into an insertion vector which has sequences, flanking the inserted genes, having sufficient homology to a region consisting of a thymidine kinase gene of the raccoon poxvirus genome to promote recombination of the inserted genes into the region;

(b) introducing both the insertion vector containing the exogenous genes, and raccoon poxvirus into susceptible host cells; and

(c) selecting the recombinant raccoon poxvirus, containing the exogenous genes which have recombined into the raccoon poxvirus genome, from plaques resulting from step (b).

7. The method according to claim 6, wherein the exogenous genes are each operably linked to a promoter, and encode feline pathogen antigens selected from the

group consisting of FeLV, Env, FIV Gag, FIV Env, FIPV M, FIPV N, FCV capsid protein, FPV VP2, and rabies-G.

8. A method of vaccinating a feline against feline pathogens, said method comprises administering to the feline a prophylactically effective amount of a multivalent recombinant raccoon poxvirus which can infect and replicate in feline cells, and contains more than one exogenous gene inserted into a region consisting of a thymidine kinase gene of the raccoon poxvirus genome which is non-essential for viral replication, wherein:

(a) the exogenous genes are operably linked to a promoter for expression; and

(b) each exogenous gene encodes a feline pathogen antigen

9. The method of claim 8, wherein the exogenous genes encode feline pathogen antigens selected from the group consisting of FELV Env, FIV Gag, FIV Env, FIPV M, FIPV N, FCV capsid protein, FPV VP2, and rabies-G.

10. The method of claim 8, wherein the exogenous genes are inserted as an expression cassette.

11. The method of claim 8, wherein the recombinant raccoon poxvirus was produced by a recombination process comprising the steps of:

(a) inserting more than one exogenous gene into an insertion vector which has sequences, flanking the inserted genes, having sufficient homology to a region of the raccoon poxvirus genome to promote recombination of the inserted genes into the thymidine kinase gene;

(b) introducing both the insertion vector containing the exogenous genes, and raccoon poxvirus into susceptible host cells; and

(c) selecting the recombinant raccoon poxvirus, containing the exogenous genes which have recombined into the raccoon poxvirus genome, from plaques resulting from step (b).

12. The method of claim 11, wherein the exogenous genes are inserted as an expression cassette.